

# Welcome

## Libby Town Meeting

*Libby Little Theater  
May 22, 2008  
7:00 to 9:00 pm*

**Libby Asbestos Site, EPA Region 8, Libby, MT**



# Tonight's Agenda

- Opening Remarks
- Environmental Resource Specialist Position
- Update on the Operable Units (OUs)
- Update on the Technical Investigations
- Questions and Answers



# The OUs

## **Processing Areas**

**(OUs 1, 2, 5, 6)**

*Includes the BNSF rail line*

*(Kathy Hernandez, EPA)*

## **Mine (OU3)**

*Includes Rainey Creek Road,  
Rainey Creek, and Kootenai River*

*(Bonnie Lavelle, EPA)*

## **Libby Residential/ Commercial District (OU4)**

*Includes Highways 2 & 37*

*(Paul Peronard, EPA)*

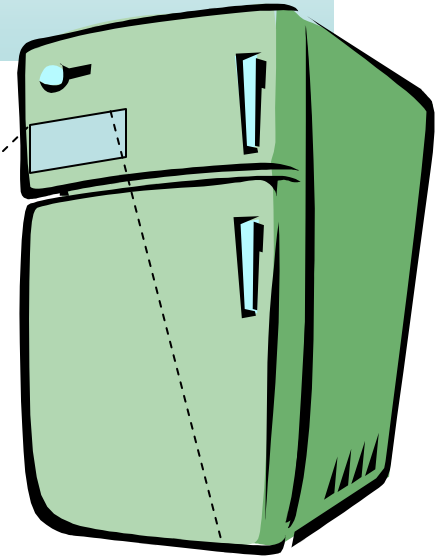
## **Troy Residential/ Commercial District (OU7)**

*(Catherine LeCours, MDEQ)*



# Environmental Resource Specialist

- Introduced in October 2006
- Goal is to help transition into future O&M
- ~200 calls to date
- We're working the bugs out



If you find vermiculite on your property, call the ERS for help in understanding and handling the situation.



**Libby Area Environmental  
Resource Specialist (ERS)**

**406-291-5335**

During regular business hours or emergencies





# Processing Areas

OUs 1, 2, 5, 6



*Kathy Hernandez, EPA*



# Processing Areas

OUs 1, 2, 5, 6



Export Plant (OU1)



Stimson Lumber Mill (OU5)



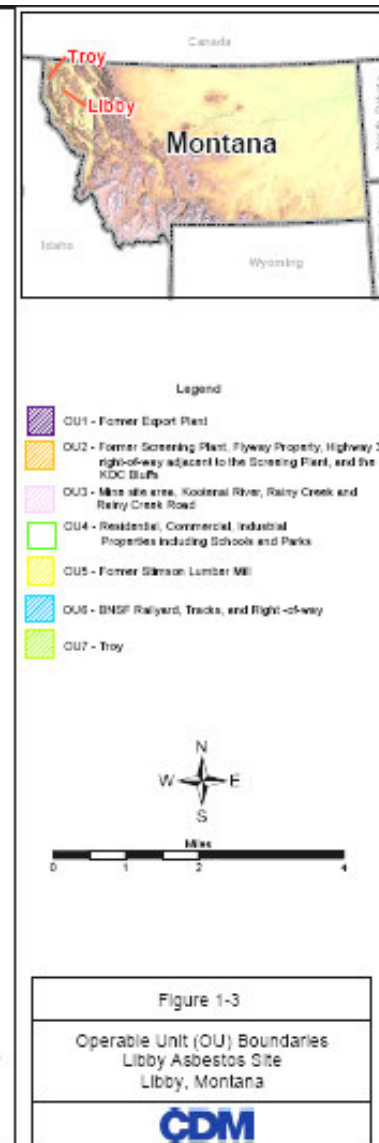
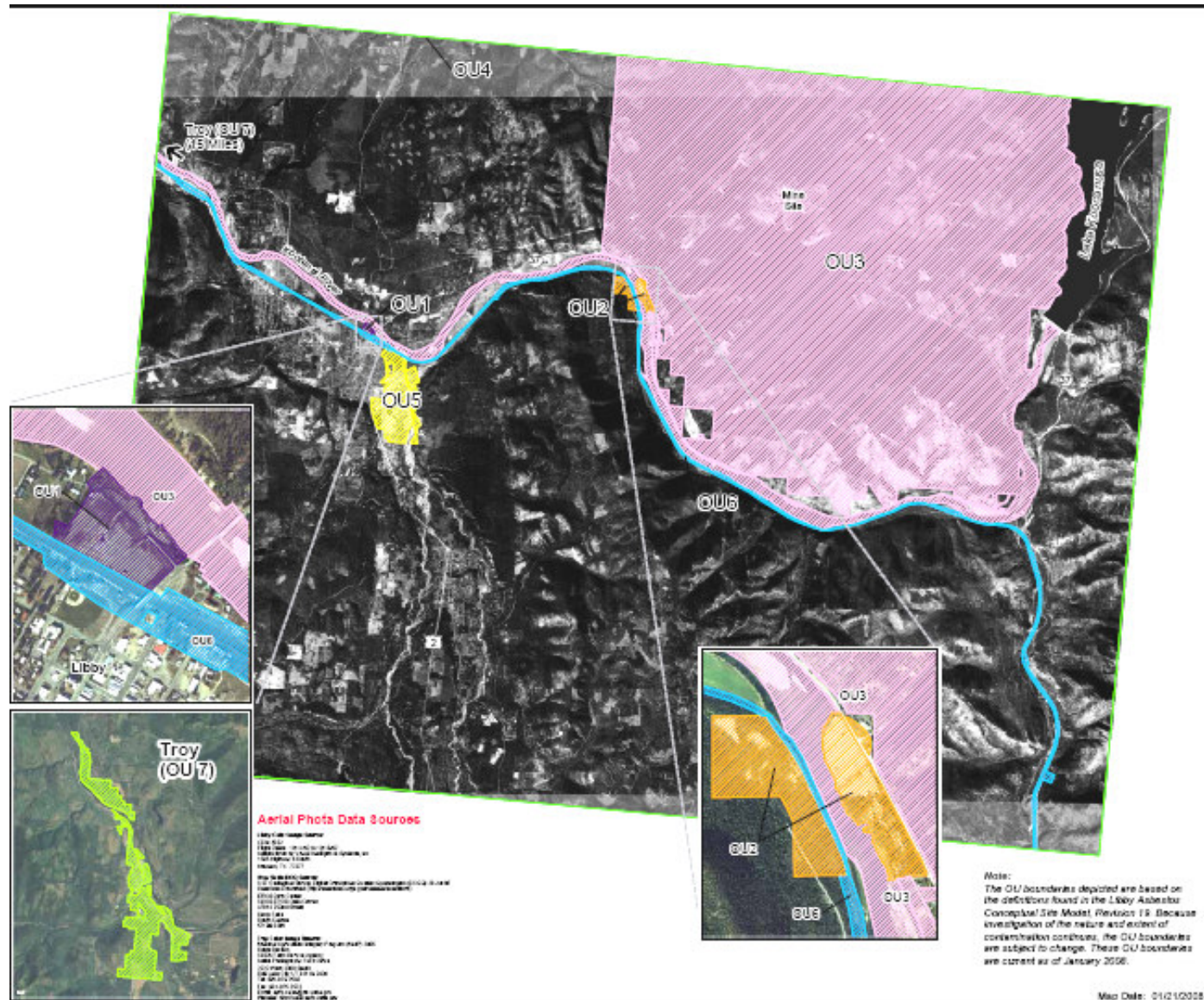
BNSF Railway (OU6)



Screening Plant (OU2)









# Stimson Lumber Mill (OU5)

- 2007 Activities

- Final Data Summary Report
- Sampled Wood Chip Piles
- Soil Visual Inspection and lab analysis
- Activity Based Sampling in Buildings
- Reuse support

- 2008 Activities

- Soil Visual Vermiculite Inspection and lab analysis
- BMX Activity Based Sampling
- Activity Based Sampling on soils
- Reuse support

# Processing Areas- Stimson Lumber Mill

OU 5

## Wood Chip/Waste Bark Piles



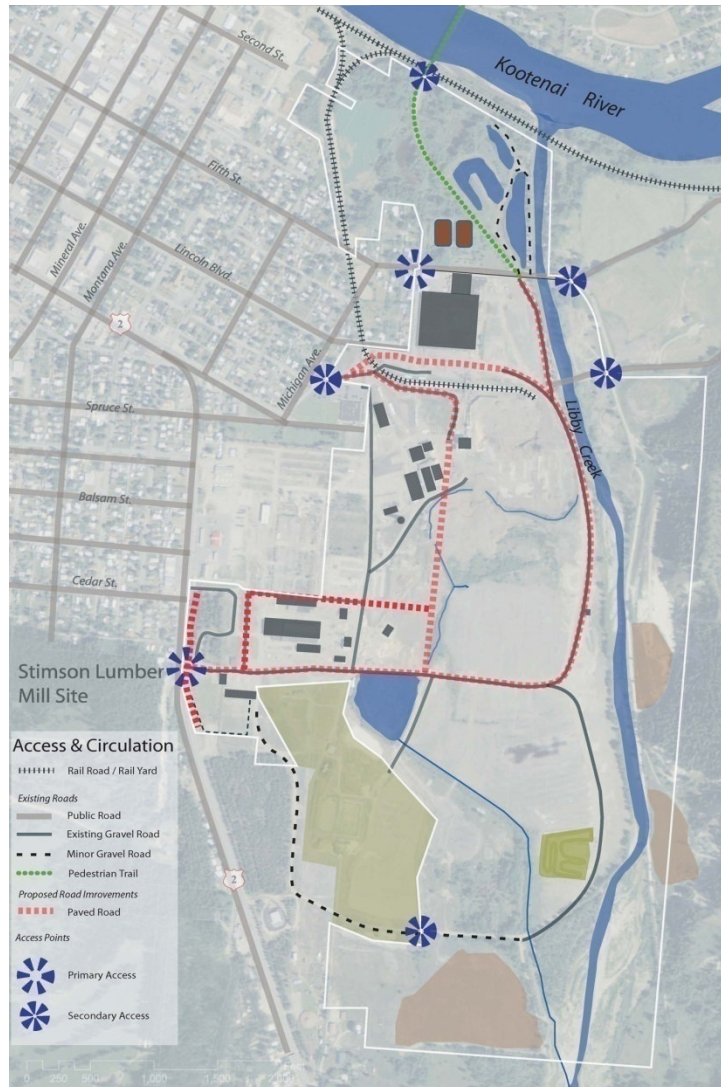


# Processing Areas

OU 5

## Re-Use

- Access Roads
- Sewer Layout



# Processing Areas

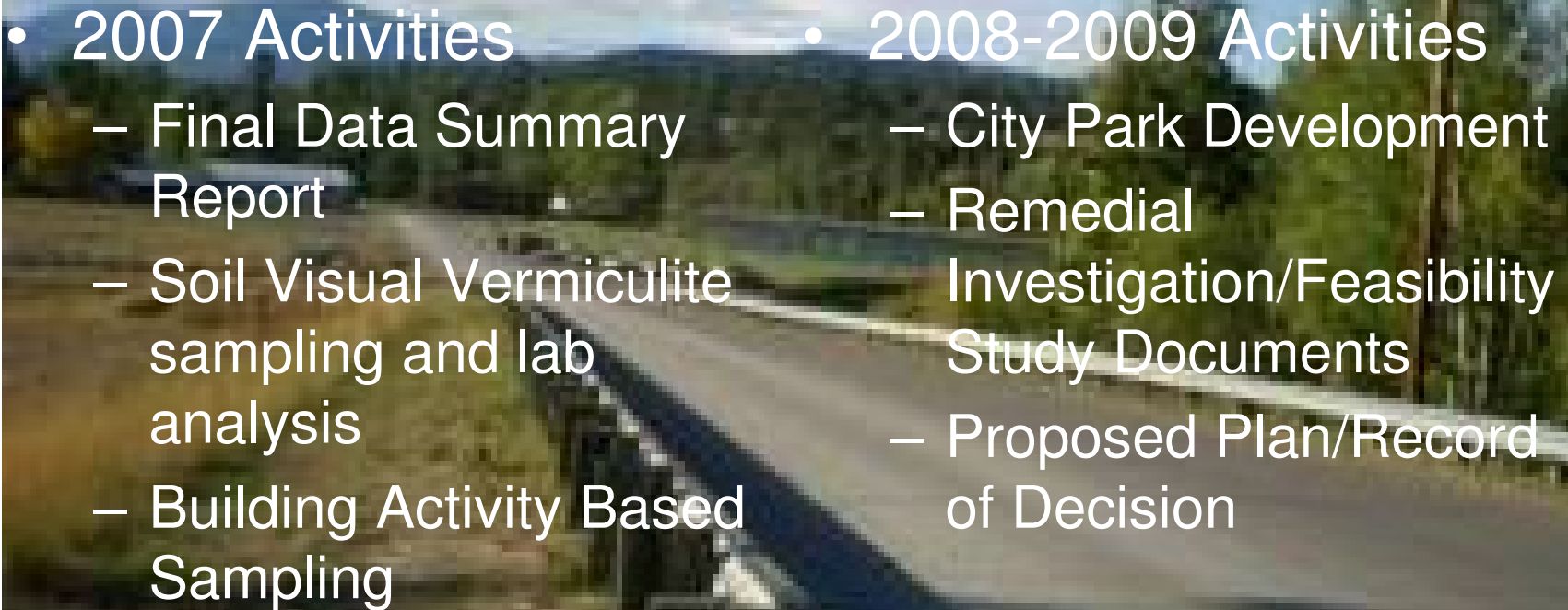
OU 5

## BMX Sampling



# Processing Areas-Export Plant

OU 1

- 
- A background photograph showing a paved road with a metal guardrail on the left side. The road curves into the distance under a blue sky with scattered clouds. Green trees and vegetation line the right side of the road.
- 2007 Activities
    - Final Data Summary Report
    - Soil Visual Vermiculite sampling and lab analysis
    - Building Activity Based Sampling
  - 2008-2009 Activities
    - City Park Development
    - Remedial Investigation/Feasibility Study Documents
    - Proposed Plan/Record of Decision



# Processing Areas

OU 1

## Activity Based Sampling



# Processing Areas-Screening Plant, KDC Flyway/Bluffs

OU 2

- Final Data Summary Report
- Data Gap Analysis
- 2009 Sampling



# Processing Areas-BNSF Rail Line

OU 6

## 2007 Activities

- Final Data Summary Report

## 2008 Activities

- Sampling along rail line
  - Visible Vermiculite and lab analysis



# The Mine

OU 3



*Bonnie Lavelle, EPA*



# The Mine

OU 3

- The former vermiculite mine
- Area surrounding the mine that has been impacted by releases from the mine, including:
  - Rainy Creek
  - Kootenai River
  - Ponds
  - Surrounding Forest
  - Rainy Creek Road

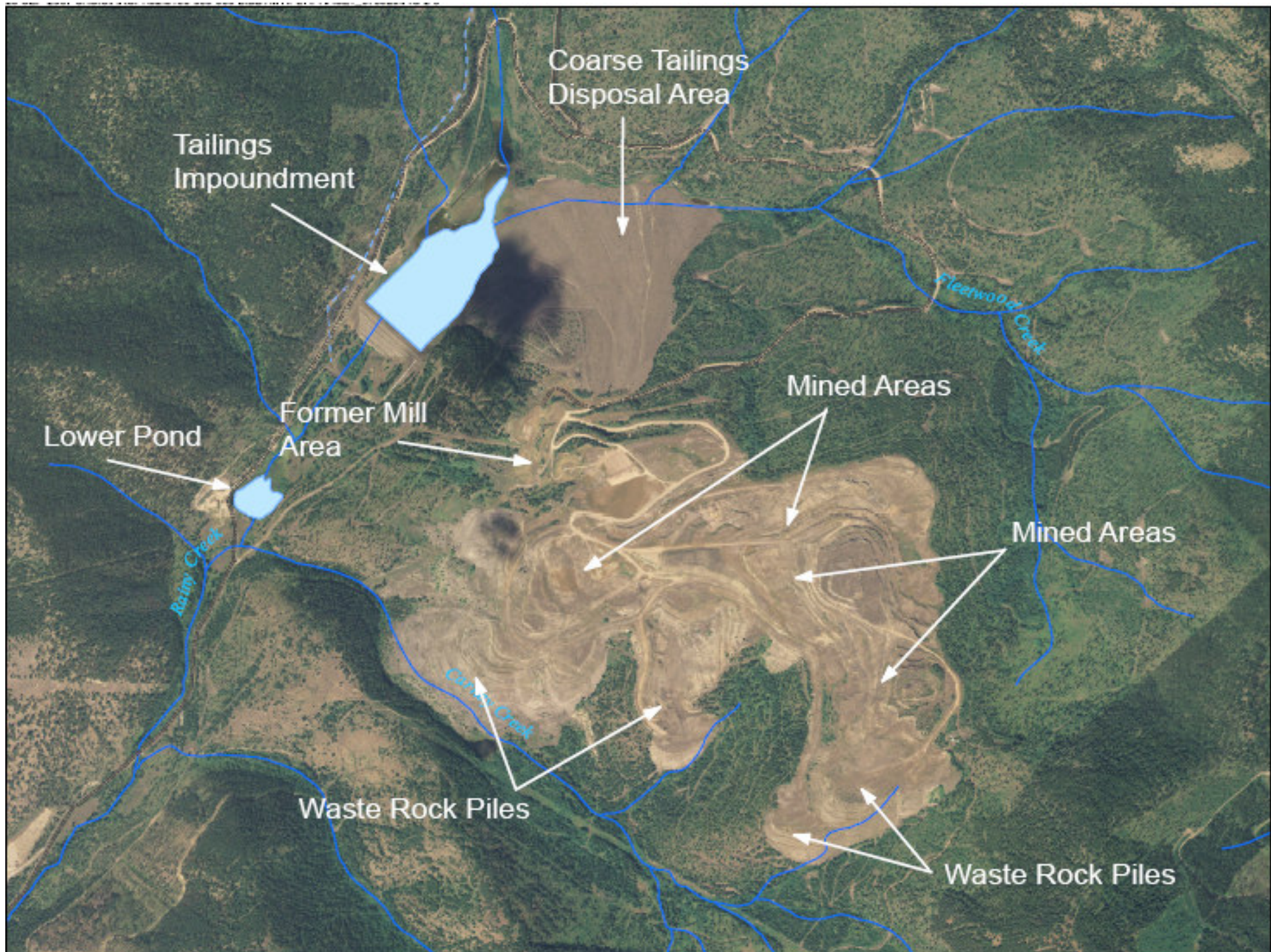
# The Mine

OU 3

## **Roles of EPA, MDEQ, and W.R. Grace**

- EPA and MDEQ develop sampling plans
- EPA performs risk assessments
- EPA and MDEQ develop objectives for cleanup
- EPA selects cleanup alternative
- W.R. Grace performs sampling
- W.R. Grace prepares summary report for EPA approval
- W.R. Grace prepares feasibility study for EPA approval





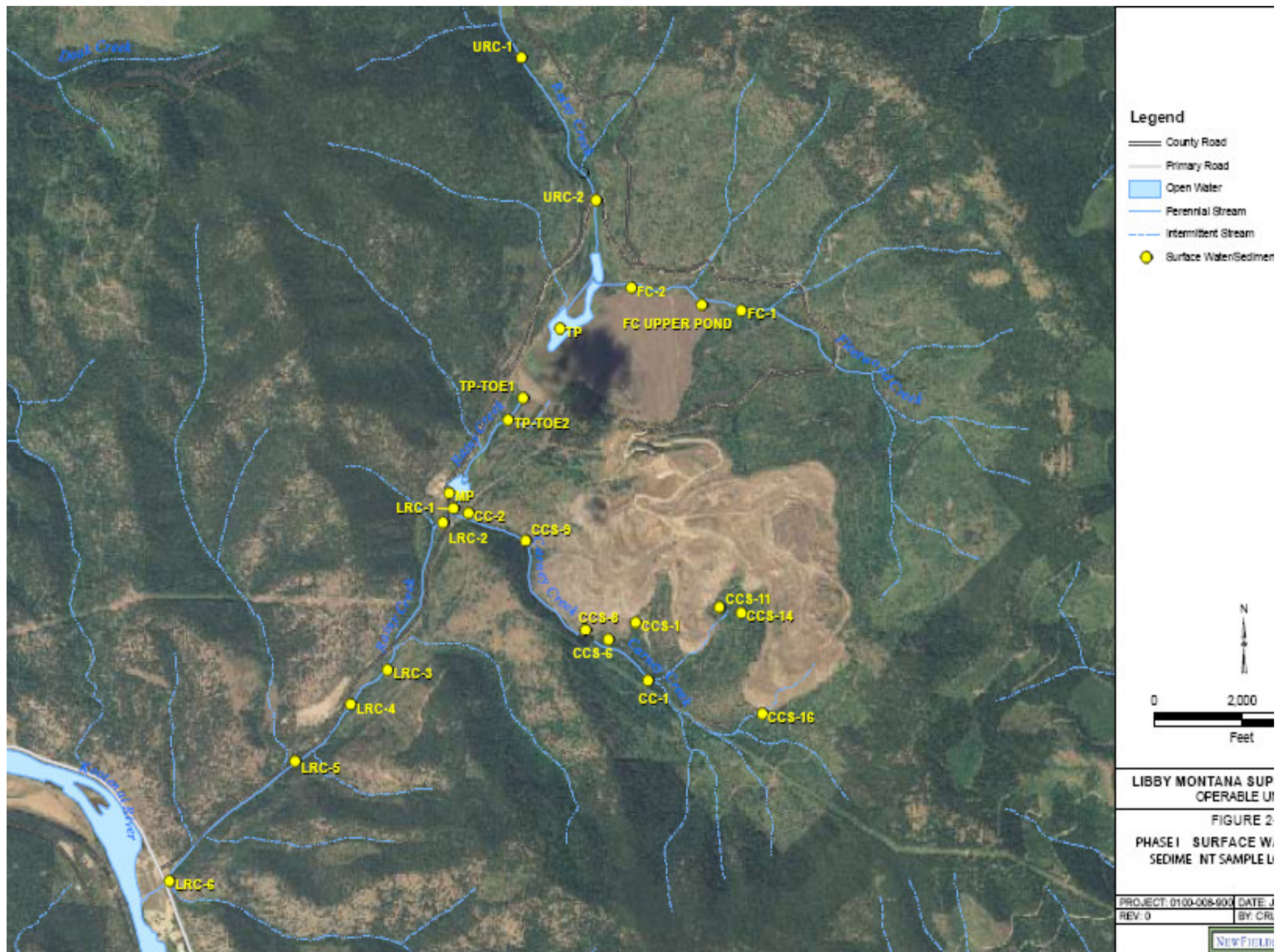




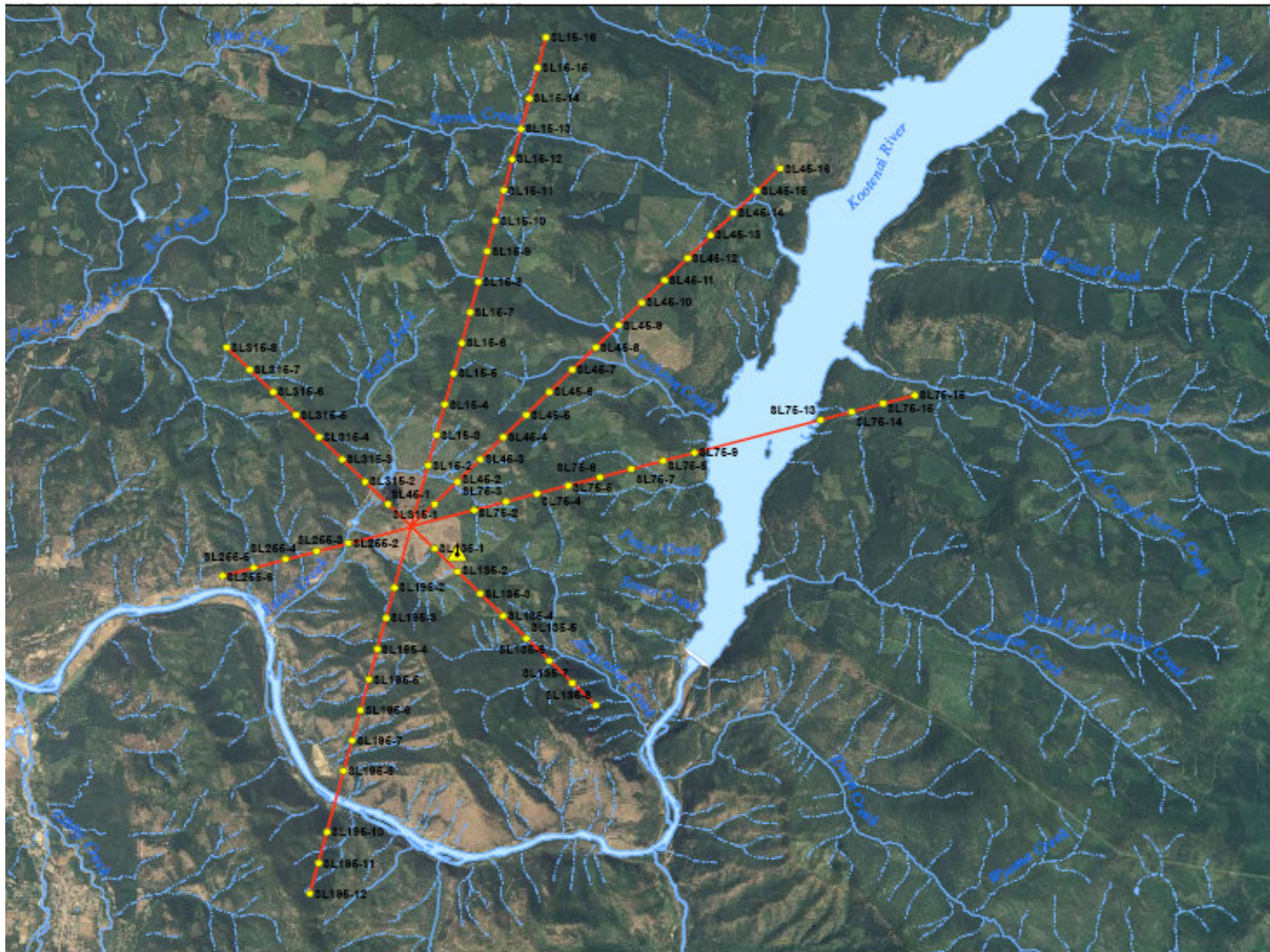














# The Mine

OU 3

## What to Expect This Year

- Evaluate Phase I results
- Develop Sampling and Analysis Plan for Phase II
- Complete the Phase II sampling



# Residential/Commercial

OU 4



*Paul Peronard, EPA*



# Residential/Commercial

OU 4

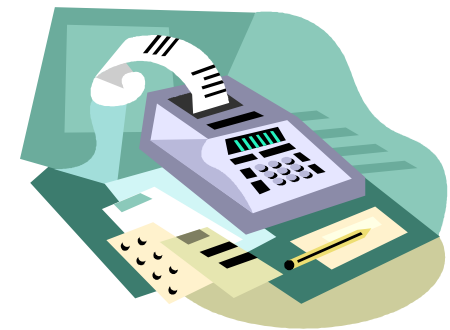
- Through 2007, 954 residential/commercial properties cleanups have been completed
- Including the Former Processing Areas, over 500,000 yds<sup>3</sup> of contaminated soil and debris have been removed

# Residential/Commercial

OU 4

## Funding

- FY08
  - Funding consistent with last four years (\$17 to \$20M/year)
- Settlement hearing June 2, \$250,000,000 funding TBD



# Residential/Commercial

OU 4

- For 2008 we plan:
  - Cleanup of 150 residential/commercial properties currently on the cleanup list (6 in Troy: 144 in Libby)
  - For these properties all visible vermiculite will be removed from the surface
  - Cleanup of Flower Creek, Granite Creek, and maybe Callahan Creek
  - Continue the ERS Program

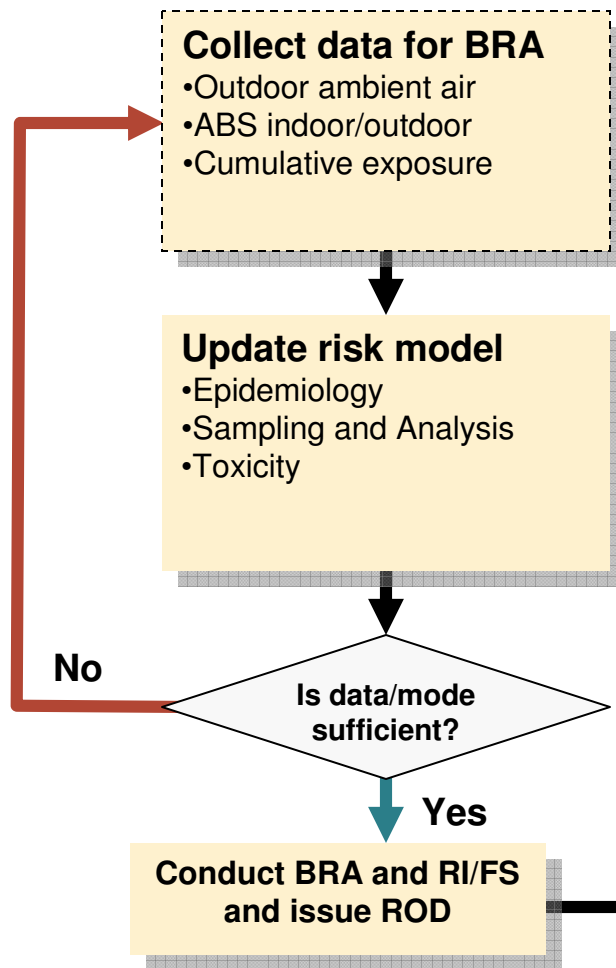




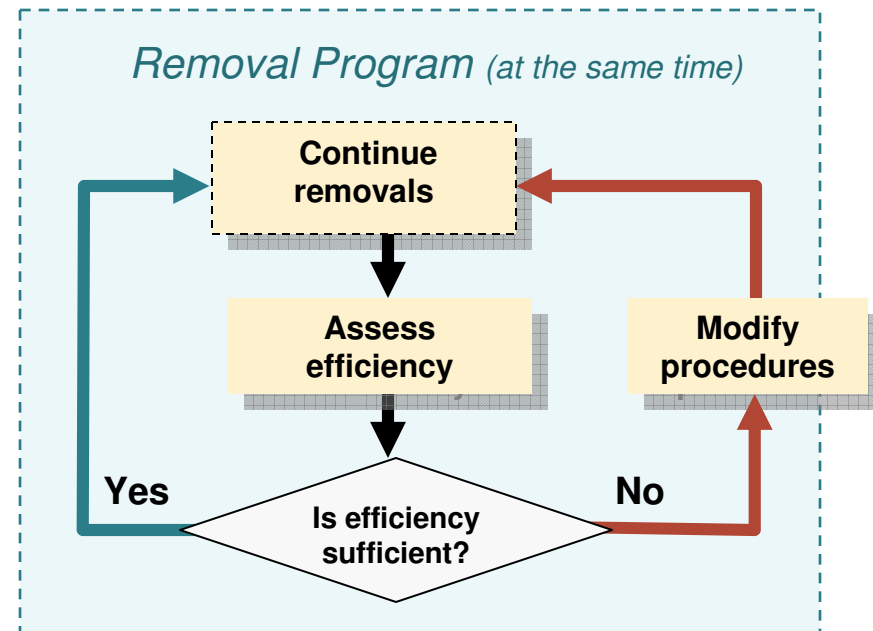
# Residential/Commercial

OU 4

## Remedial Program



## Removal Program (at the same time)



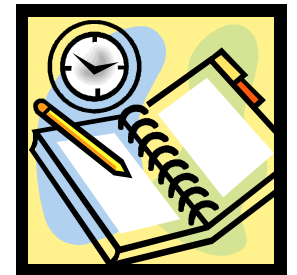
# Residential/Commercial

OU 4

## Long Term Timeline

- Continue current property cleanups (April 08)
- Complete “Big Three” exposure assessment (FY08)
- Complete clean up of properties currently identified as “needing clean up” (FY10)
- Complete exposure assessment (FY09)
- Finalize “new” risk model (FY10)
- Finalize Baseline Risk Assessment (FY10/11)

**Today’s news...**



# Troy Residential/Commercial Investigation

OU 7



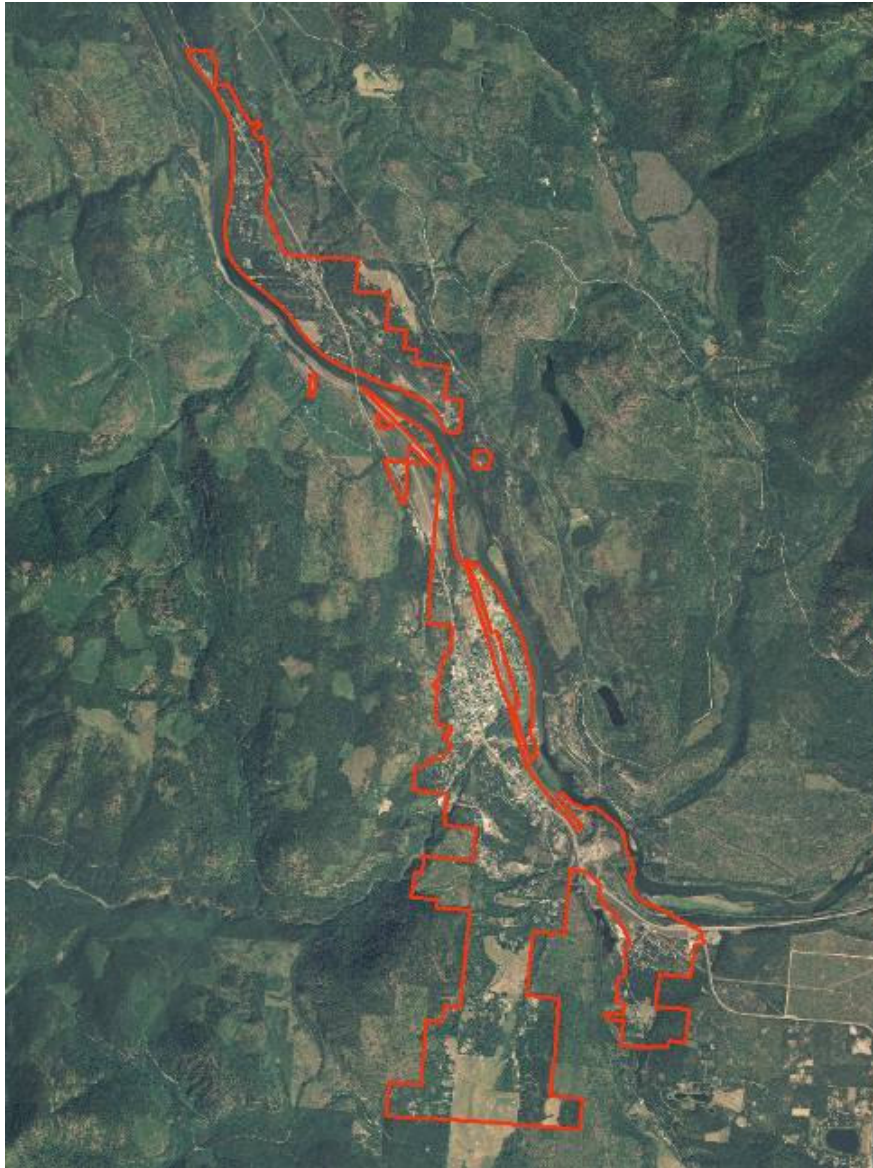
*Catherine LeCours, DEQ*



# Troy Residential/Commercial Investigation

OU 7

- Approximately 1,200 properties
- Began 2007
- Troy Asbestos Property Evaluation (TAPE)
- Nature and Extent of Vermiculite at Troy homes and businesses
- Build on methods/procedures/lessons learned from Libby OU4



# Troy Study Area Boundary

# Troy Residential/Commercial Investigation

OU 7

- Identify locations of vermiculite in and around Troy residences and businesses (visual inspection)
- Determine levels of asbestos present in and around Troy residences and businesses (sample collection)
- Educate residents to reduce exposure
- Begin to plan for cleanup

# Troy Residential/Commercial Investigation

OU 7





# Troy Residential/Commercial Investigation

OU 7

## Visual Soil Inspection

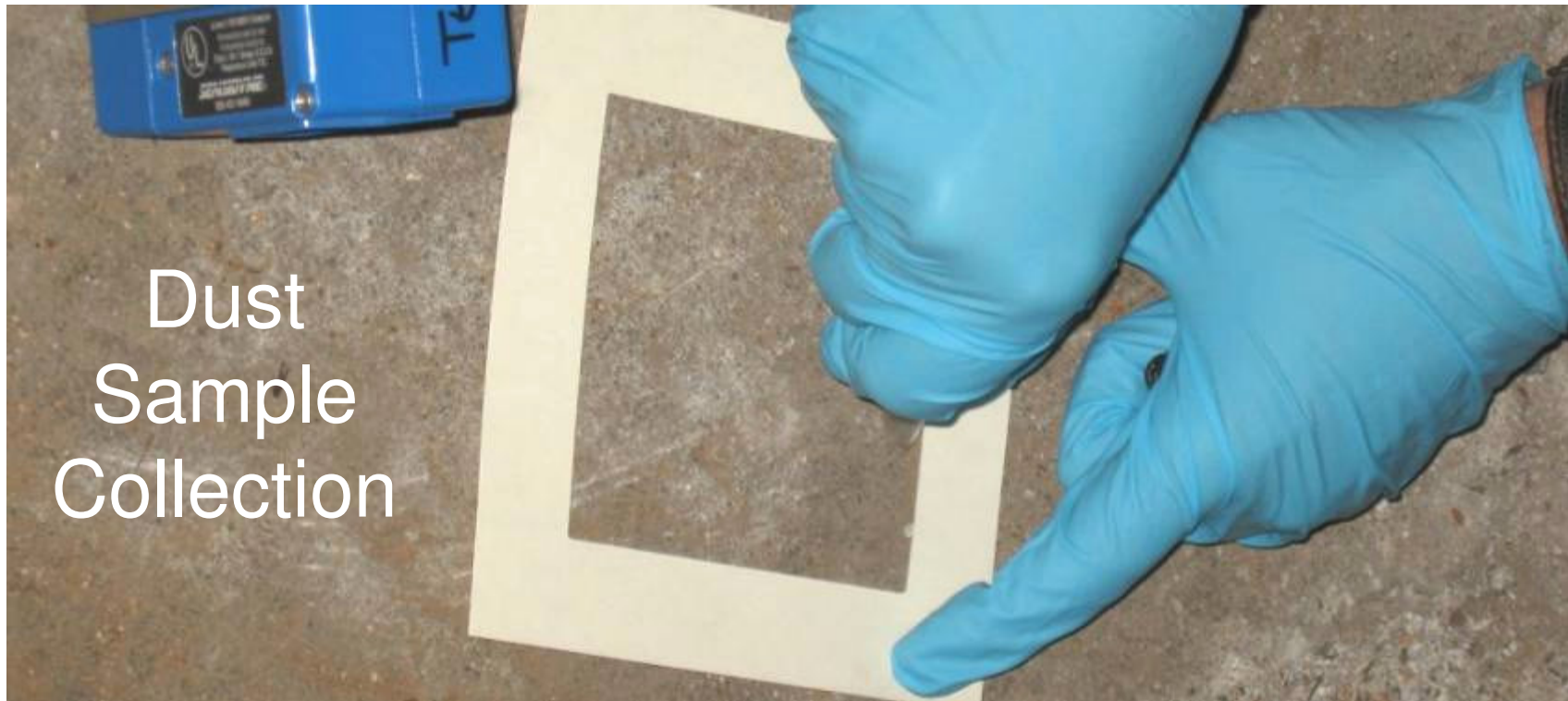
Vermiculite





# Troy Residential/Commercial Investigation

OU 7



# Troy Residential/Commercial Investigation

OU 7



Interior Soil  
Sampling

# Troy Residential/Commercial Investigation

OU 7



Soil  
Sampling

# Troy 2007 Statistics

OU 7

- 1,175 study boundary parcels
- 1,083 access agreements mailed
- 627 affirmative access agreements received
- 12 declined access agreements received
- 535 parcels inspected
- 170 (32% of 535) parcels meeting removal criteria
- 1,616 dust samples collected
- 2,010 soil samples collected
- 515 other samples collected
- 6 parcels identified for clean up in 2008



# Troy 2008 Statistics

OU 7

- 1,223 study boundary parcels
- 572 access agreements mailed

## Inspection Schedule:

- June 2 through August 15
- None week of June 30

# DEQ Troy Information Center

OU 7

303 N. Third St  
(across from Senior Center,  
next to Library)

Monday through Friday

8:00 a.m. to 4:30 p.m.

(406) 295-9238

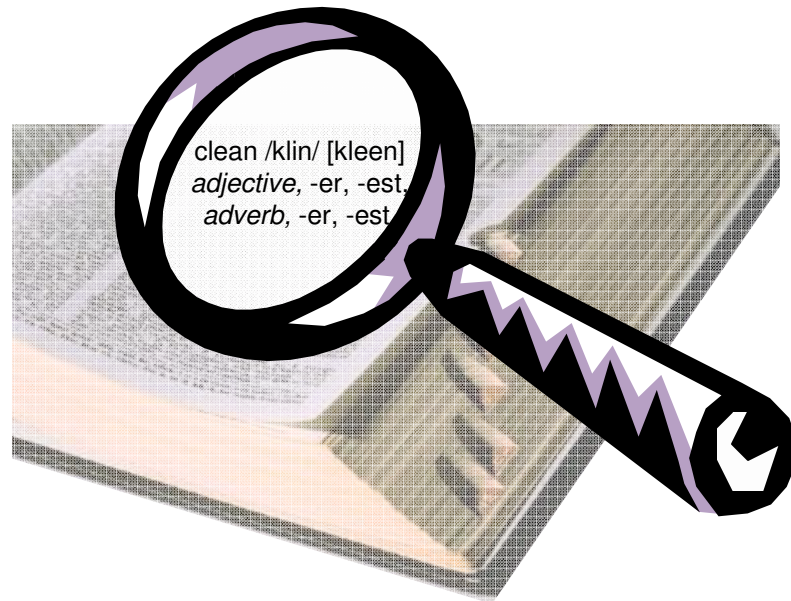
[info@deqtroyinfo.com](mailto:info@deqtroyinfo.com)



Break?

# Technical Investigations

- Activity Based Sampling Results
- “Background” Soil Study
- Libby Action Plan





# Activity Based Sampling



*Paul Peronard, EPA*

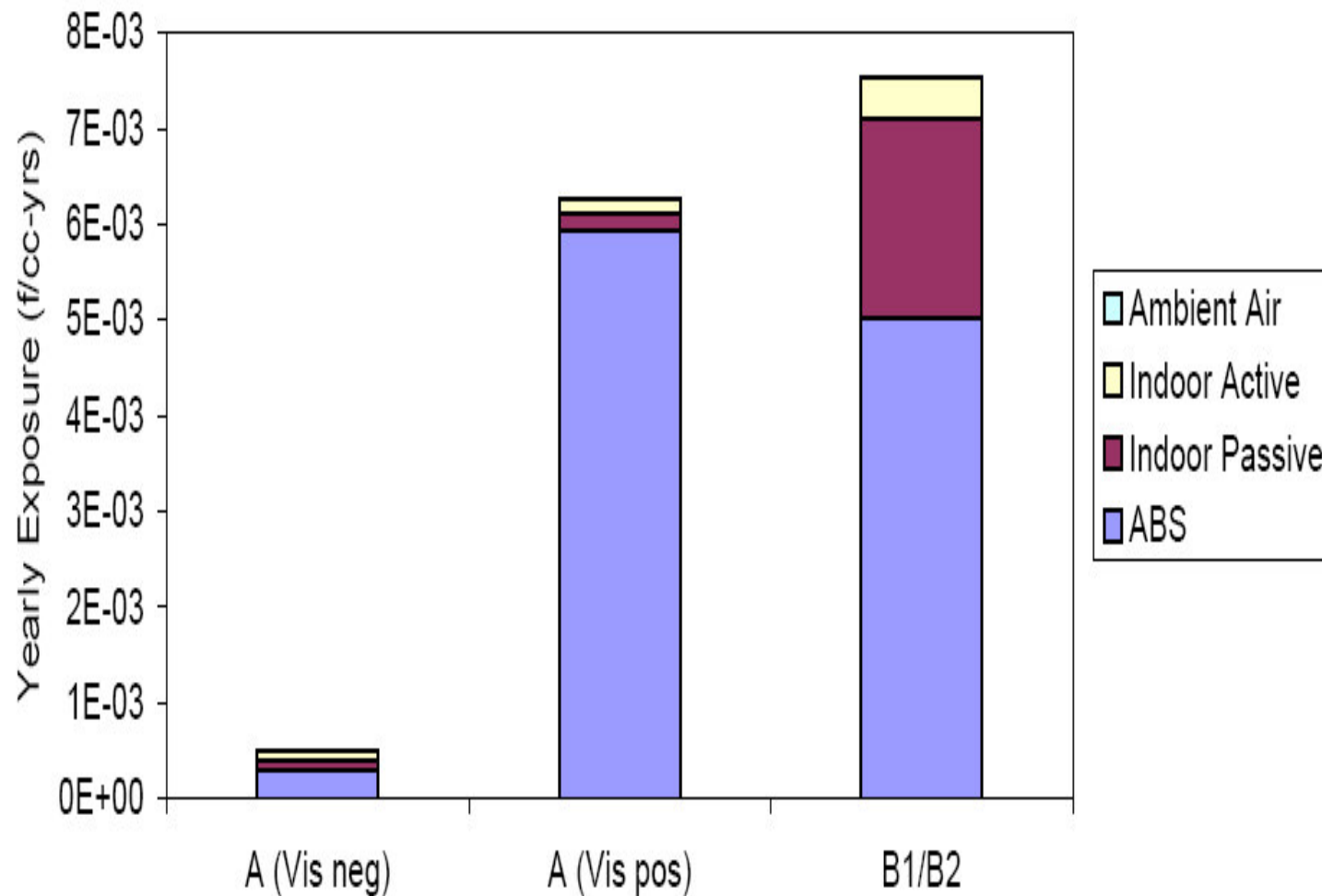
# Activity Based Sampling

- “Big Three” pathways to be completed by June 2008
- Design of sampling plans for the remaining exposure pathways to be completed this year
- Remaining ABS work to be done in 2009

# Activity Based Sampling

- Indications so far:
  - We will need to do a “background” and a “background exposure” study
  - The data are highly variable because many factors beyond the level of asbestos in soil control the exposure
  - The biggest contribution to exposure to LA is disturbance of outdoor soils with LA/vermiculite

# Activity Based Sampling





# Activity Based Sampling

## What Can You Do to Reduce Exposure?

- Reduce Soil Disturbance
  - Reduce intrusive activities in areas that have vermiculite
  - Water areas to reduce dust or work after rainfall or in early morning
- Reduce Transport of Dust Indoors
  - Bathe pets frequently
  - Remove shoes indoors
  - Keep windows closed on windy days
  - Rinse off exposed skin areas after gardening
  - Rinse off gardening tools and don't bring dusty clothes indoors
- Reduce Dust Movement Indoors
  - Use Your HEPA vac

# “Background” Soil Study



*Mary Goldade, EPA*



# What Does “Background” Soil Mean?

- We’ll use the term “background” soil to refer to presence of Libby Amphibole at “low levels” in soil
  - Non-detect by PLM-VE **and** no visible vermiculite present
- Low levels of Libby Amphibole in soil can result from several sources:
  - Naturally deposited
  - Deposited due to human activity or disturbance (mining-related activities or other human activities)

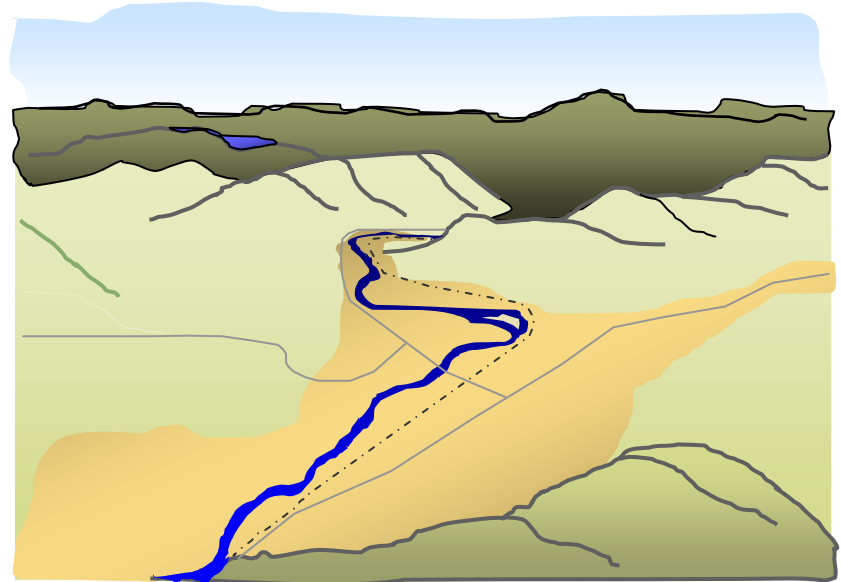




# Low Level Libby Amphibole in Soil (aka) “Background” Soil Study

## Purpose:

- Identify areas where low levels of Libby Amphibole are present in soil in and outside the Libby Valley
- Measure exposures associated with disturbance of soils containing low levels of Libby Amphibole



# Key Areas of Study

- 1) Geologic Assessment
- 2) Low-level Soil Method Development
- 3) Libby Valley Soil Evaluation
- 4) Activity Based Sampling



# Areas of Study

- **Geologic Assessment**—characterize the geology of areas in and outside of the Libby Valley
  - Identify Libby Amphibole
  - Identify surrogate minerals indicative of Libby Amphibole
- **Low-level Soil Method Development**—investigate an alternate method to test Libby Amphibole in soil below 0.2%





## Areas of Study (cont'd)

- **Libby Valley Soil Evaluation** —characterize the levels of Libby Amphibole present in soils inside and outside of the Libby Valley
- **Activity-Based Sampling**—measure exposures to disturbances of low level Libby Amphibole in soil
  - non-detect by PLM-VE & no visible vermiculite present

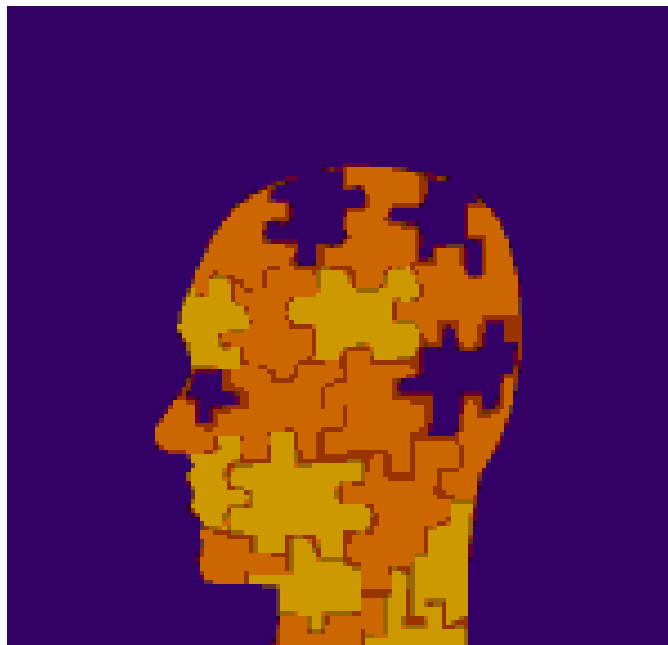


# Schedule

- **Geologic Assessment**
  - USGS pilot study June 2008
- **Low-level Soil Method Development**
  - Available method options evaluated Spring 2009
- **Libby Valley Soil Evaluation**
  - Commence Summer 2009
- **Activity Based Sampling in Low-level Soils**
  - Commence Summer 2009



# Libby Action Plan

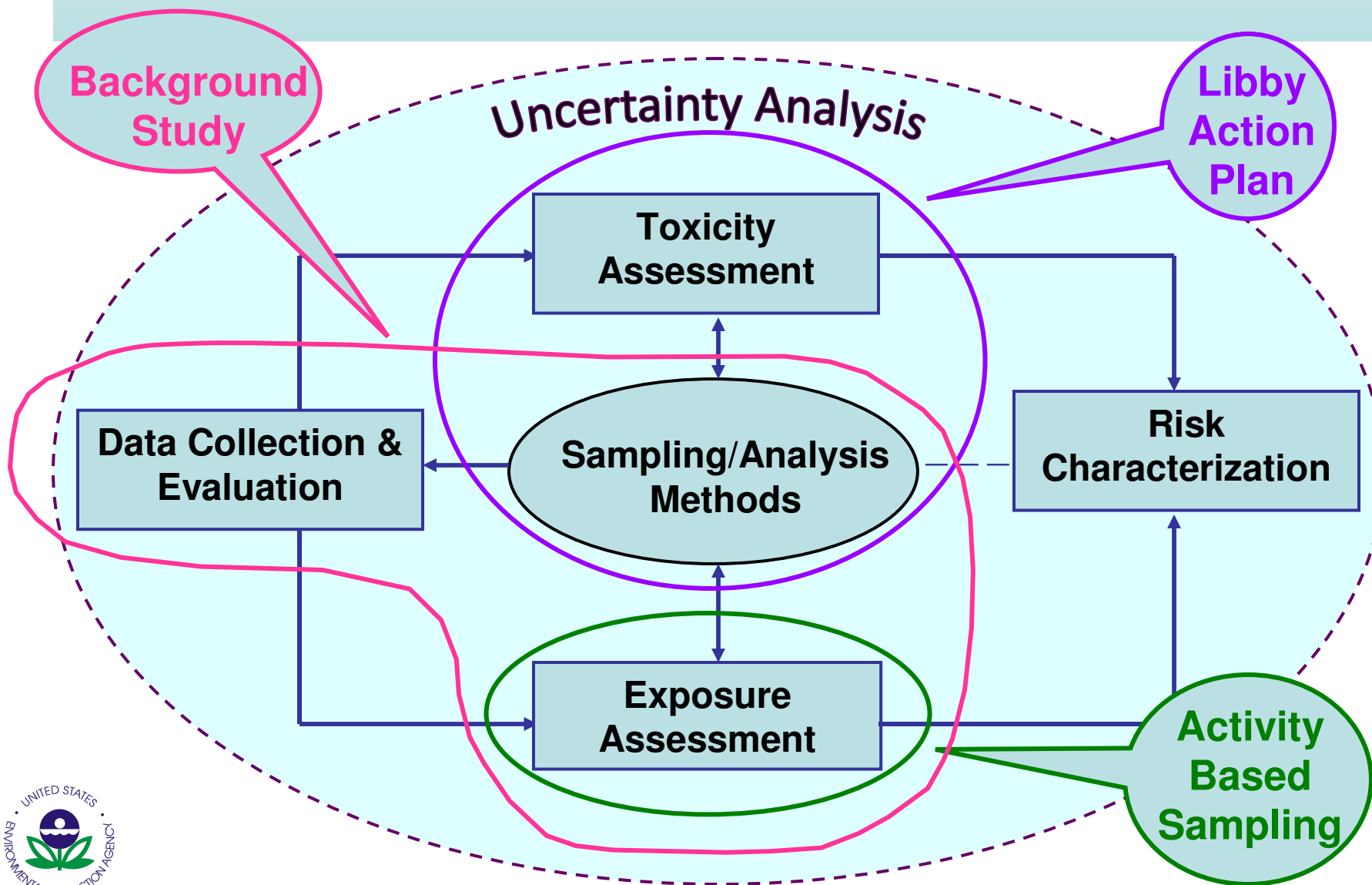


*Wendy O'Brien, EPA*





# Baseline Risk Assessment



# Libby Action Plan

## Toxicity Assessment Support Studies

### **Site-Specific Reference Concentration for Non-Cancer Endpoints**

EPA Region 8 & EPA Office of Research and Development (ORD)

### **Libby Amphibole Cancer Evaluation**

EPA ORD National Center for Environmental Assessment

### **Libby Amphibole Toxicology Studies**

EPA ORD National Health Effects and Environmental Research Laboratory



# Site-Specific Reference Concentration (RfC) for Libby Amphibole

- Addresses non-cancer health effects
- No existing RfC for any type of asbestos
- Development of Site-specific RfC
  - Collaborative work with University of Cincinnati
  - Based on Marysville, Ohio worker cohort
  - Includes verification of Libby vermiculite fiber size distribution
  - Anticipated external peer review Summer 2009



# Libby Amphibole Cancer Evaluation

- Libby Amphibole-specific inhalation unit risk value
  - Lung cancer and mesothelioma
- Based on W.R. Grace workers from Libby
- Collaborative project with National Institute for Occupational Safety and Health (NIOSH)
- Anticipated EPA review Fall 2009





# Libby Amphibole Toxicology Studies

- Libby Amphibole sample preparation underway
  - Toxicology study components
    - In vitro dissolution & toxicity
    - Comparative toxicity
    - Inhalation toxicity
    - Dosimetry
    - Autoimmune disease studies
    - Cardiovascular toxicity studies
- } *Final funding decision pending*
- Studies are long-term



# Questions?



*As always, we welcome your questions (here or at the Info Center) and encourage your participation in the Community Advisory Group*

